

WE CLAIM:

5 1. A method of processing data in one or more databases of a database system, the method comprising:

receiving one or more source tables, wherein the source tables describe one or more objects in the database;

10 generating one or more mapping tables, wherein the mapping tables describe the content and relationships of the source tables;

generating one or more inverted tables from the content and relationships of the source tables, wherein the inverted tables are based on the generated mapping tables; and

mapping fields of the source tables to a predefined related set of fields.

15 2. The method of claim 1, wherein the predefined related set of fields comprises an international standard.

3. The method of claim 1, wherein the predefined related set of fields comprises a specialized standard.

20 4. The method of claim 1, further comprising incrementally updating the inverted tables based on new source table data.

25 5. The method of claim 1, further comprising receiving a query requesting an entity from one or more of the databases, wherein the query requests data with one or more fields of the predefined related set of fields.

6. The method of claim 5, wherein the database entity comprises an object.

30 7. The method of claim 5, wherein the database entity comprises a table.

8. The method of claim 5, further comprising identifying the database fields that map to the fields of the predefined related set of fields searched.

9. The method of claim 8, further comprising identifying one or more objects satisfying the query.

10. The method of claim 9, further comprising retrieving the object data from each database.

11. The method of claim 10, further comprising formatting the retrieved object data.

12. The method of claim 11, further comprising displaying the retrieved object data in the database field structure.

13. The method of claim 11, further comprising displaying the retrieved object data in a structure of the predefined related set of fields.

14. The method of claim 1, wherein the source tables describe a single database.

15. The method of claim 1, wherein the source tables describe multiple databases.

16. The method of claim 15, wherein the source tables describe heterogeneous databases.

17. The method of claim 15, further comprising receiving a query requesting one or more entities from a plurality of databases, wherein the query is based on one or more fields of the predefined related set of fields.

18. The method of claim 17, further comprising identifying fields of the plurality of databases that map to the fields of the predefined related set of fields searched.

19. The method of claim 18, further comprising identifying one or more objects satisfying the query of the plurality of databases.

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20. The method of claim 19, further comprising retrieving the object data from one or more databases of the plurality of databases.

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21. The method of claim 17, wherein the query is based on a plurality of fields of the predefined related set of fields.

22. The method of claim 21, further comprising identifying fields of the plurality of databases that map to the plurality of fields of the predefined related set of fields searched.

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23. The method of claim 22, further comprising identifying one or more objects satisfying the query of the plurality of databases.

24. The method of claim 23, further comprising retrieving the object data from one or more databases of the plurality of databases.

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25. The method of claim 1, wherein the source tables describe distributed databases.

26. The method of claim 1, wherein the source tables are represented by a combination of the mapping tables and the inverted tables.

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27. The method of claim 1, wherein object data is simultaneously retrieved from different databases.

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28. The method of claim 1, wherein the source tables comprise a relational database.

29. The method of claim 1, wherein the source table platform is XML.

30. The method of claim 1, wherein the source table platform is SGML.

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31. The method of claim 1, wherein the inverted table comprises a terms look up table, and wherein the terms look up table is used to identify objects in the database.

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32. The method of claim 31, wherein the terms lookup table associates individual terms with objects.

33. The method of claim 1, wherein the inverted table comprises a value lookup table.

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34. The method of claim 33, wherein a value in the value lookup table comprises one or more terms.

35. The method of claim 33, wherein the value lookup table associates values with objects.

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36. The method of claim 33, wherein values of different data types are stored in separate fields of the value lookup table.

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37. A system for processing data in one or more databases of a database system, comprising: one or more computers having a data store coupled thereto, wherein the data store stores data; and one or more computer programs, performed by the one or more computers, for processing data in one or more databases of a database system, wherein the one or more computers are programmed to receive one or more source tables, wherein the one or more source tables describe one or more objects in the one or more databases; generate one or more mapping tables, wherein the one or more mapping tables describe the content and relationships of the one or more source tables; generate one or more inverted tables from the content and relationships of the one or more source tables, wherein the one or more inverted tables are based on the one or more generated mapping tables; and map one or more fields of the one or more source tables to a predefined related set of fields.

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38. The system of claim 37, wherein the predefined related set of fields comprises an international standard.

39. The system of claim 37, wherein the predefined related set of fields comprises a specialized standard.

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40. The system of claim 37, wherein the one or more computers are programmed further to incrementally update the one or more inverted tables based on new source table data.

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41. The system of claim 37, wherein the one or more computers are programmed further to receive a query requesting an entity from one or more of the databases, wherein the query requests data with one or more fields of the predefined related set of fields.

42. The system of claim 41, wherein the database entity comprises an object.

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43. The system of claim 41, wherein the database entity comprises a table.

44. The system of claim 41, wherein the one or more computers are programmed further to identify the database fields that map to the one or more fields of the predefined related set of fields searched.

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45. The system of claim 44, wherein the one or more computers are programmed further to identify one or more objects satisfying the query.

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46. The system of claim 45, wherein the one or more computers are programmed further to retrieve the object data from each database.

47. The system of claim 46, wherein the one or more computers are programmed further to format the retrieved object data.

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48. The system of claim 47, wherein the one or more computers are programmed further to display the retrieved object data in the database field structure.

49. The system of claim 47, wherein the one or more computers are programmed

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further to display the retrieved object data in a structure of the predefined related set of fields.

5 50. The system of claim 37, wherein the one or more source tables describe a single database.

51. The system of claim 37, wherein the one or more source tables describe multiple databases.

10 52. The system of claim 51, wherein the one or more source tables describe heterogeneous databases.

15 53. The system of claim 51, wherein the one or more computers are programmed further to receive a query requesting one or more entities from a plurality of databases, wherein the query is based on one or more fields of the predefined related set of fields.

20 54. The system of claim 53, wherein the one or more computers are programmed further to identify one or more fields of the plurality of databases that map to the one or more fields of the predefined related set of fields searched.

55. The system of claim 54, wherein the one or more computers are programmed further to identify one or more objects satisfying the query of the plurality of databases.

25 56. The system of claim 55, wherein the one or more computers are programmed further to retrieve the object data from one or more databases of the plurality of databases.

30 57. The system of claim 53, wherein the query is based on a plurality of fields of the predefined related set of fields.

58. The system of claim 57, wherein the one or more computers are programmed further to identify fields of the plurality of databases that map to the plurality of fields of the

predefined related set of fields searched.

5 59. The system of claim 58, wherein the one or more computers are programmed further to identify one or more objects satisfying the query of the plurality of databases.

60. The system of claim 59, wherein the one or more computers are programmed further to retrieve the object data from one or more databases of the plurality of databases.

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61. The system of claim 37, wherein the source tables describe distributed databases.

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62. The system of claim 37, wherein the source tables are represented by a combination of the mapping tables and the inverted tables.

63. The system of claim 37, wherein object data is simultaneously retrieved from different databases.

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64. The system of claim 37, wherein the source tables comprise a relational database.

65. The system of claim 37, wherein the source table platform is XML.

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66. The system of claim 37, wherein the source table platform is SGML.

67. The system of claim 37, wherein the inverted table comprises a terms look up table, and wherein the terms look up table is used to identify objects in the database.

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68. The system of claim 67, wherein the terms lookup table associates individual terms with objects.

69. The system of claim 37, wherein the inverted table comprises a value lookup

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table.

5 70. The system of claim 69 wherein a value in the value lookup table comprises one or more terms.

71. The system of claim 70, wherein the value lookup table associates values with objects.

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72. The system of claim 71, wherein values of different data types are stored in separate fields of the value lookup table.

15 73. A system for processing data in one or more databases of a database system, comprising:

one or more computers;

one or more computer programs, performed by the one or more computers, for processing data in one or more databases of a database system;

20 one or more source tables stored on the one or more computers, wherein the one or more source tables describe one or more objects in the one or more databases;

one or more mapping tables stored on the one or more computers, wherein the one or more mapping tables describe the content and relationships of the one or more source tables;

25 one or more inverted tables stored on the one or more computers, wherein the one or more inverted tables are generated from the content and relationships of the one or more source tables, wherein the one or more inverted tables are based on the one or more generated mapping tables; and

a predefined related set of fields stored on the one or more computers, wherein one or more fields of the one or more source tables are mapped to one or more fields of the predefined related set of fields.

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74. The system of claim 73, wherein the one or more computers are programmed further to receive a query requesting an entity from the one or more of the databases, wherein the query requests data with one or more fields of the predefined related set of fields.



75. The system of claim 74, wherein the one or more computers are programmed further to identify the database fields that map to fields of the predefined related set of fields  
5 searched.

76. The system of claim 75, wherein the one or more computers are programmed further to identify one or more objects satisfying the query.

10 77. The system of claim 76, wherein the one or more computers are programmed further to retrieve the object data from each database.

78. The system of claim 77, wherein the one or more computers are programmed further to format the retrieved object data.  
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79. The system of claim 78, wherein the one or more computers are programmed further to display the retrieved object data in the database field structure.

80. The system of claim 78, wherein the one or more computers are programmed further to display the retrieved object data in a structure of the predefined related set of fields.  
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81. The system of claim 73, wherein the one or more computers are programmed further to receive a query requesting one or more entities from a plurality of databases, wherein the query is based on one or more fields of the predefined related set of fields.  
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82. The system of claim 81, wherein the one or more computers are programmed further to identify fields of the plurality of databases that map to the fields of the predefined related set of fields searched.

30 83. The system of claim 82, wherein the one or more computers are programmed further to identify one or more objects satisfying the query of the plurality of databases.

84. The system of claim 83, wherein the one or more computers are programmed

further to retrieve the object data from one or more databases of the plurality of databases.

5 85. The system of claim 81, wherein the query is based on a plurality of fields of the predefined related set of fields.

86. The method of claim 85, wherein the one or more computers are programmed further to identify fields of the plurality of databases that map to the plurality of fields of the  
10 predefined related set of fields searched.

87. The method of claim 86, wherein the one or more computers are programmed further to identify one or more objects satisfying the query of the plurality of databases.

15 88. The method of claim 87, wherein the one or more computers are programmed further to retrieve the object data from one or more databases of the plurality of databases.